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Matters for action by the Conference of the Parties at its first meeting: matters stipulated under the Convention: the establishment of arrangements in regard to effectiveness evaluation as referred to in paragraph 2 of article 22

Establishment of arrangements in regard to effectiveness evaluation as referred to in paragraph 2 of article 22

Note by the secretariat

1. Paragraph 1 of article 22 of the Minamata Convention on Mercury provides that the Conference of the Parties shall evaluate the effectiveness of the Convention, beginning no later than six years after the date of entry into force of the Convention and periodically thereafter at intervals to be decided by it. Paragraph 2 of the same article provides that the Conference of the Parties shall, at its first meeting, initiate the establishment of arrangements for providing itself with comparable monitoring data on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations.

2. Paragraph 3 of article 22 also provides that the evaluation shall be conducted on the basis of available scientific, environmental, technical, financial and economic information, including reports and other monitoring information provided in line with the arrangements for obtaining comparable monitoring information, reports submitted by the parties in line with the reporting requirements set out in article 21, information and recommendations provided pursuant to article 15 (pertaining to the implementation and compliance committee) and reports and other relevant information on the operation of the financial assistance, technology transfer and capacity-building arrangements put in place under the Convention.

3. At its sixth session, the intergovernmental negotiating committee to prepare a global legally binding instrument on mercury considered a document prepared by the secretariat on the information on monitoring data then currently available. The committee decided that the secretariat should seek further information on the availability of monitoring data from all Governments and relevant organizations and prepare a compilation and analysis of the means of obtaining monitoring data for consideration by the committee at its seventh session. Emphasis was given to the capacity-building needs of developing countries and countries with economies in transition, to the role played by regional activities and to the value of partnerships.

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4. At its seventh session, the intergovernmental negotiating committee considered the compilation and analysis provided by the secretariat and approved a plan to assist the Conference of the Parties, at its first meeting, in initiating the arrangements for the provision of comparable monitoring data to facilitate the effectiveness evaluation (UNEP(DTIE)/Hg/INC.7/22/Rev.1, annex VIII). Under that plan, the interim secretariat would:

(a) Compile information on existing monitoring programmes and how they could contribute to an overall monitoring approach, including the availability of baseline information;

(b) Develop a draft road map, including the development of an outline of types of data, the creation of a draft framework for a global monitoring approach to integrate comparable results of possible future monitoring, and develop a draft strategy for incorporating reports and other monitoring information that could be considered for evaluation of the Convention's effectiveness;

(c) Draft a report with recommendations on the establishment of arrangements for providing comparable monitoring data on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations, as provided for in paragraph 2 of article 22, including references for assessing baselines.

5. The secretariat called for the submission of further information on monitoring data. Submissions were made by eight Governments, one regional economic integration organization, the United Nations Environment Programme (UNEP) and four non-governmental organizations. The submissions were compiled and are available online (see www.mercuryconvention.org/Negotiations/submissionsforCOP1/tabid/5535).

6. The secretariat prepared a draft road map as requested by the committee at its seventh session, (see annex I). The secretariat also prepared a report on the establishment of arrangements for the Conference of the Parties to provide itself with comparable monitoring data, together with references for assessing baselines (see annex II). Both documents were made available on the website from mid-January, and Governments and other entities were invited to provide comments on the initial drafts.

7. The effectiveness evaluation to be undertaken by the Conference of the Parties will be conducted on the basis of all the elements covered in paragraph 3 of article 22. However, it should be noted that, in accordance with the decision of the committee at its seventh session, the draft road map focuses primarily on establishing the arrangements for providing comparable monitoring data. It covers the period between the first and second meetings of the Conference of the Parties and, while it does propose early consideration of the process of assembling the other information in order to ensure the processes are complementary, it does not address the subsequent methodology for undertaking the actual effectiveness evaluation. That is a matter for further consideration by the Conference of the Parties, as is the establishment, if necessary, of expert groups and the development of work plans for any such groups. Elements of the process used for the effectiveness evaluation undertaken under the Stockholm Convention on Persistent Organic Pollutants may be useful in establishing the mechanism for effectiveness evaluation.

Suggested action by the Conference of the Parties

8. The Conference of the Parties may wish to consider the draft road map and agree to its use in the process of developing comparable monitoring data to contribute to the effectiveness evaluation of the Minamata Convention on Mercury. In developing that process, the Conference of the Parties may wish to draw upon the report provided in annex II of the present note.

9. The Conference of the Parties may also wish to consider the process for assembling the other information set out in paragraph 3 of article 22 and for the actual effectiveness evaluation to ensure that the processes are complementary.

Annex I

Draft road map in relation to paragraph 2 of article 22

1. The interim secretariat of the Minamata Convention on Mercury, in consultation with national Governments, regional and subregional monitoring programmes and partnerships, the World Health Organization, regional representatives, regional and national institutions, academia, industry, civil society and others, has developed a draft road map as requested by the seventh session of the intergovernmental negotiating committee to prepare a global legally binding instrument on mercury. The draft road map includes:

- The process to identify the types of data that could be comparable on a regional basis, as well as their availability
- The creation of a framework for a global monitoring approach that integrates comparable results of future monitoring that countries and stakeholders may choose to undertake
- The development of a draft strategy for incorporating reports and other monitoring information that can be used in evaluating the Convention's effectiveness

2. The draft road map sets out activities that may be carried out after the first meeting of the Conference of the Parties, subject to agreement to such activities and the availability of financial and other resources.

3. Taking into account the scope of the work and recognizing the need for expert input in some areas, the following road map is proposed.

Activity	*Time frame*
The Conference of the Parties, at its first meeting, establishes a process to initiate the establishment of arrangements which will enable the provision of comparable mercury monitoring data to the Conference for a timely evaluation of the effectiveness of the Convention, beginning no later than six years after the date of entry into force of the Convention. The elements of this process are set out in the road map.	September 2017
The Conference of the Parties recognizes the complexity of the scientific and technical requirements to develop a draft framework for appropriate media selection and integrate comparable results of current and future monitoring. The Conference therefore establishes an ad hoc group of experts to work on the development of the monitoring programme for use in evaluating the effectiveness of the Convention. The Conference agrees on the size and structure of the ad hoc group of experts, taking into account the need for suitable expertise and geographic representation.	September 2017
Nominations for the ad hoc group of experts are provided to the secretariat through the bureau members of the Conference of the Parties.	November 2017
The secretariat, drawing on previously submitted information and work undertaken in other forums, in particular the Stockholm Convention on Persistent Organic Pollutants, prepares initial draft proposals for types of data that could be considered comparable, as well as an initial proposal for a draft framework for monitoring and provides the initial draft proposals to the ad hoc group of experts electronically.	January 2018
The secretariat, drawing on previously submitted information and work undertaken in other forums, particularly the Stockholm Convention, prepares a draft strategy for incorporating reports and other monitoring information and makes it available to the ad hoc group of experts for comments and any further submissions relevant to the strategy.	February 2018
The ad hoc group of experts reviews the initial draft proposals on the types of data, the draft framework for monitoring and the draft strategy circulated by the secretariat; discusses the information, potentially at a face-to-face meeting; and provides comments to the secretariat, either electronically or directly at a face-to-face meeting. Teleconferences or webinars may be used to discuss documents as required.	March 2018

Activity	*Time frame*
The secretariat prepares revised versions of the documents and circulates them to the members of the ad hoc group of experts for consideration.	May 2018
The ad hoc group of experts meets to discuss the revised proposals and prepare recommendations for the second meeting of the Conference of the Parties, including any recommendations for new or additional work to be undertaken.	June 2018
The secretariat revises the draft strategy for incorporating reports and other monitoring information in the light of comments and submissions.	June 2018
The secretariat makes the outcomes of the expert group, the draft strategy for incorporating reports and other monitoring information available to the second meeting of the Conference of the Parties for its consideration and further recommendations.	November 2018 (tentative date for the second meeting of the Conference of the Parties)

Annex II

Report on the establishment of arrangements for providing comparable monitoring data on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations

1. At its seventh session, the intergovernmental negotiating committee to prepare a global legally binding instrument on mercury requested the interim secretariat to draft a report with recommendations on the establishment of arrangements for providing comparable monitoring data on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations, as provided for in paragraph 2 of article 22 of the Minamata Convention on Mercury, including references for assessing baselines.

2. In preparing the present report, the secretariat sought input and information on data from Governments, regional and subregional programmes and other sources, and also took into account the information submitted by interested stakeholders in response to calls for submissions following both the sixth and the seventh sessions of the intergovernmental negotiation committee. The report addresses a number of key questions that have arisen in considering the establishment of arrangements for providing such data and trends. It then provides initial recommendations for consideration by the Conference of the Parties.

3. In analysing paragraph 2 of article 22, there are a number of issues for the Conference of the Parties to consider, which are set out below.

A. Establishment of arrangements for the provision of comparable monitoring data

1. Comparability

4. In consultations, in particular with regional organizations with experience in the analysis of data obtained from many sources, it seems that it is possible to determine comparability between data from the same media obtained by different sampling or analytical methodologies, provided that appropriate factors are taken into account.

5. There are a number of technical issues to be considered. Important among those issues are sample collection methodology, analytical methodology and data treatment. Standard methodologies have been developed to assess levels of mercury in many different media, ensuring consistency and comparability of results using the same methodology. In some cases, results from different methodologies can be compared using information about the methodologies and assessing them against standardized testing procedures. In addition, as new and improved assessment techniques are developed, information on how such results compare with those obtained from other methodologies needs to be developed and made available. That point should be considered while such techniques are under development. It is important to recognize that some current technologies will not be readily available in all regions. It is also important to include data from all regions in an overall assessment of the effectiveness of the Minamata Convention on Mercury. Quantitative and representative data with quality assurance and quality control procedures are needed.

6. Comparability of data from a variety of media can also be affected by the rationale for the sampling activities. The purpose of the sampling and analysis may inform the selection of sampling locations or methodology. For example, in selecting monitoring locations and media, national policymakers may focus on identifying hotspots of concern, such as sites with local pollution sources, or may focus on the background mercury levels to which the population may be exposed. While both monitoring programmes may provide useful information to assist national policymakers in making informed decisions, the purpose of data collection may have an effect on the data, which should be considered when such data are included for evaluation purposes. Additional monitoring data that reflect the goals of the effectiveness evaluation process may be necessary, and additional monitoring sites and/or changes to the locations of current monitoring sites in some regions may need to be considered as part of this process.

7. Other factors that affect local mercury levels, such as weather patterns, climatic conditions and seasonality, should also be recorded and included with the reported data in order to allow consideration of those factors in interpretation of the data.

8. In considering trends in levels of mercury and mercury compounds in biotic media and vulnerable populations, the above-mentioned factors should be considered. Spatial and temporal issues should also be taken into account. Older data may potentially add to the information on temporal trends if the criteria for acceptability are in place and if sufficient information is available to determine its comparability to more recent data. Comparison of temporal data may be facilitated by using the same method over time. Attention should be given to modelling methodologies. Modelling is important for filling in monitoring data gaps, but it is also important in linking multimedia data sets. The identification of key indicator species may be needed to ensure that sufficient comparable and relevant information can be obtained.

9. It is important that there be a global underpinning for the overall assessment of the effectiveness of the Convention. It is therefore desirable to ensure a broad range of data from as many regions as possible, understanding that available technologies will vary from region to region.

2. Establishment of arrangements

10. In initiating the establishment of arrangements to provide comparable monitoring data, an important initial consideration should be the data currently available through established national, subregional, regional or global monitoring programmes. An assessment protocol will be required to determine the quality and applicability in assessing the effectiveness of the Convention.

11. Information on available data has been requested as part of the follow-up to both the sixth and seventh sessions of the intergovernmental negotiating committee, and a number of national Governments, subregional organizations and regional organizations have provided information. Some information is also available at the global level.

12. In preparation for the implementation of the Convention, many Governments have undertaken individual assessments of mercury emissions to air and releases to land and water, and developed plans for consideration of point sources of mercury at the national level. For some Governments, this was a general assessment at the desk level, while for others, a more detailed assessment was undertaken. Such data contribute to the body of information on sources of mercury to the environment, which can then be used along with appropriate models for estimating mercury levels locally and more remotely, depending on deposition pathways.

13. In addition, the Convention includes an obligation for each party to establish an inventory of emissions from relevant sources, as specified in article 8 and annex D, no later than five years after the date of entry into force of the Convention for it. Such inventories may provide useful data in the future. As specified in article 9, each party is also obliged to establish an inventory of releases of mercury from relevant sources, which will provide additional data, no later than five years after the date of entry into force of the Convention for it. Each party will further have an obligation to report on its implementation of the Convention. While the format for reporting has not yet been finalized, quantitative data on mercury emissions and releases might be obtained through those reports. Information from each party should be provided through a national focal point.

14. In evaluating mercury in human populations, susceptibility (for example, of children and pregnant women) and exposure (for example, through the consumption of contaminated fish and marine mammals and through artisanal and small-scale gold mining) should be considered. There may be a need to assess exposure to methyl mercury through hair analysis of the mother, cord blood analysis for the fetus/baby and/or urine analysis to measure inorganic mercury exposure. Biota monitoring should be linked to environmental media and human biomonitoring. There will need to be a way to evaluate mercury levels in a regional ecosystem and environment and to further measure its levels in foods (from both sea and land). Assessment should be harmonized with existing protocols on sample collection, analysis and reporting.

15. Global assessments of mercury levels in the environment have been undertaken by the United Nations Environment Programme (UNEP) using a combination of actual and modelled data, with a new technical assessment expected in 2018.

16. A global database of chemical contaminants in food, the Global Environment Monitoring System – Food Contamination Monitoring and Assessment Programme (GEMS/Food) database has extensive data on the levels of mercury. The database currently includes analytical results for over 75,000 samples relating to elemental mercury and over 1,000 samples involving methyl mercury. The

methyl mercury samples were obtained from biota, mainly different fish species, but also seafood and some mammalian samples. These data may provide useful input on the levels of mercury in biota.

17. For atmospheric monitoring, there are good existing networks that may be used for information on mercury. For marine monitoring, a global research programme may be a suitable mechanism owing to the international nature of the oceans. For biota monitoring, networking will be significantly different among particular species to be selected by the Convention, e.g. marine, coastal or terrestrial species. For human biomonitoring, reporting performed under national action plans could provide information on exposure resulting from artisanal and small-scale gold mining, while for exposure resulting from fish consumption there may need to be national efforts to identify vulnerable populations.

18. Taking the existing data availability and quality, the Conference of the Parties may wish to consider whether there is a need for additional monitoring capacity, or whether efforts should be directed towards compilation and analysis of existing data sources. Consideration of this complex issue and the development of plans for additional monitoring may best be handled by referring it to a technical group.

3. Costs

19. In establishing arrangements to provide comparable monitoring data, the issue of cost will need to be considered.

20. The process of compiling existing data has direct costs at the secretariat level, as time is required to source the data and prepare the compilation. In addition, costs are incurred by all Governments and institutions that respond to calls for submissions and provision of information, as the compilation and submission process requires staff time.

21. Efforts may need to be taken to ensure comparability, ideally during the process of data collection and prior to its submission. However, in the initial period following entry into force, in particular, a variety of data may be provided for which comparability will need to be determined. That may require evaluation of the data and associated information, which, in turn may require expert input. Under certain mechanisms (for example, the Convention on Long-Range Transboundary Air Pollution), quality assurance programmes are administered that increase confidence in the data but incur costs.

22. Expert meetings incur financial costs, including through support for participant travel and the costs associated with the work of the secretariat. There are also costs for time invested by experts, including doing preparatory work, drafting documents, reviewing and editing, and participating in the meetings.

23. As stated in paragraph 3 of article 22, the evaluation shall be conducted on the basis of available information. Therefore, existing monitoring systems at national, regional and global scales will form the basis for the establishment of arrangements for providing comparable monitoring data. If the Conference of the Parties determines that additional monitoring activities will facilitate the effectiveness evaluation, the costs that such activities incur on a one-time or ongoing basis should be taken into consideration.

24. Any additional monitoring activities set up by the Conference of the Parties will incur costs, as will activities that Governments determine to be required at the national level for their implementation of the Convention. The use of regional monitoring approaches may reduce such costs on a country-by-country basis and lead to improved efficiency. The sustainability of any monitoring activities will require a level of commitment, in particular to ensure proper capacity-building, training, ongoing data collection and analysis.

B. References for assessing baselines

25. In order to determine whether there are changes in the levels of mercury and mercury compounds in the environment, decisions will need to be taken about what will be used as a comparative figure or baseline. Once the first formal assessment under the Convention of mercury levels has been completed, it will be able to be used for comparison with later assessments. However, to consider any changes for the first evaluation, the Conference of the Parties may need to choose what the baseline should be and whether it should be established on a national basis or globally. In addition, consideration needs to be given to whether baselines are set on an individual basis by site or at a provincial, national, subregional, regional or global basis. Baselines could also be based upon a particular point in time, applied across geographic areas. Furthermore, modelling or comparison of levels over time will be necessary to determine trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations.

26. The Convention does not contain any obligations for reduction in relation to mercury levels at any fixed point in time, and the issue of baselines was not negotiated. There are a number of options that could be considered.

27. The Conference of the Parties could decide not to establish a baseline for the period prior to the entry into force of the Convention, but rather to use the first assessment as the basis for future comparison. That would limit the assessment of the effectiveness of the Convention in the early stages, as it would not be possible to assess whether there had been changes in the levels of mercury in the environment or in biota until the second evaluation. While this process has been used in other Conventions, the availability of information on mercury levels in the environment might mean that other approaches are feasible.

28. The Conference of the Parties could decide that, where available, submissions made to other formal processes could be used as a basis for setting baselines. Such submissions could include information considered by the Convention on Long-Range Transboundary Air Pollution and information available from the Asia-Pacific Mercury Monitoring Network or the Arctic Monitoring and Assessment Programme. Where such submitted information is not available, it might be feasible to use available national data that is representative of global trends. Information needed to set baselines could benefit from coordination and cooperation through forums such as the Mercury Air Transport and Fate Partnership Area of the Global Mercury Partnership of UNEP.

29. Information on global emissions and releases of mercury and on levels in the environment is available in the Global Mercury Assessment, which has been published in 2002, 2008 and 2013, with a new version planned for publication in 2018. It is recognized that, owing to changes in methodologies, results are not directly comparable between the 2013 and 2008 versions; however, they still provide considerable background information. Concerns had been raised during the preparation of previous versions of the assessment about the data (e.g., how it was obtained and its accuracy) and the methodology (in particular, the methodology used for modelling). Attempts have been made to address these concerns in the preparation of the latest version. Following such efforts, the Conference of the Parties may be willing to consider the latest version of the assessment document as a means of establishing a baseline.

30. As the GEMS/Food database can be searched in different time periods, it may be useful as a source of information on trends in levels of mercury and mercury compounds in biota. It should be noted that the only mercury compound currently included is methyl mercury.

31. Additional considerations include whether it is necessary for baselines to be established at a national or a regional level and, if so, the point in time at which such baselines should be set. Other multilateral environmental agreements set baselines, in particular calendar years, but there is also the potential to tie the baseline to the year of entry into force of the Convention for each party. Given the nature of mercury as a global pollutant, consideration could be given to establishing baselines for mercury levels in the environment at a selected range of locations that reflect global movement of mercury. Changes in emission and release information could then be considered at the national level, which might be able to be assessed through national reporting submitted under article 21 of the Convention.

C. Recommendations

32. The Conference of the Parties may wish to consider the following recommendations.

33. Determining comparable representative data for future use in an evaluation of the effectiveness of the Convention is complex and requires expert consideration. The Conference of the Parties may therefore wish to consider establishing a small group of technical experts who would assess categories of available information, make recommendations for appropriate sampling media and agree on techniques for the consideration of data, including determining comparability of data obtained using different methodologies or methods of analysis. For the sake of cost-efficiency, the group should work primarily through electronic means, including webinars.

34. The Conference of the Parties may wish to task the small group of technical experts with the identification of:

(a) Relevant existing data, as well as methodologies to achieve data comparability, standardization and regional networking, that would support the use of monitoring data within the Convention;

(b) Modelling methodologies that can be used in conjunction with country-specific data to estimate changes in human exposure by linking mercury emissions with concentrations in other media (e.g., deposition, water, fish in various ocean sectors), thereby providing estimates of changes in those media as a result of changes in emissions;

(c) Questions related to policy that are answered by the existing data. The timescales and specific monitoring and modelling information currently used should be delineated.

35. The Conference of the Parties may consider the data currently available for the determination of the levels of mercury present in the environment, including in biota, to be sufficient. The question of additional information, which may improve future assessments, may be referred by the Conference of the Parties to the group of technical experts, together with options for obtaining such information and relative costs for doing so.

36. In considering the establishment of a baseline against which progress in implementing the Convention can be assessed, the Conference of the Parties may wish to consider using available assessments, including the Global Mercury Assessment and the Global Environment Monitoring System – Food Contamination Monitoring and Assessment Programme. The Conference may also wish to use information available from countries at a national or regional level as the basis for future comparisons.